

spacing of fixed seating must be sufficient to allow ready escape in case of fire or other emergency. The following are minimal requirements:

(i) Aisles 4.6 meters (15 feet) in length or less must not be less than 610 millimeters (24 inches) wide.

(ii) Aisles more than 4.6 meters (15 feet) in length must not be less than 760 millimeters (30 inches) wide.

(iii) Where the seating is in rows, the distance from seat front to seat front must not be less than 760 millimeters (30 inches).

(2) If the intended operation of a vessel is to carry offshore workers aboard for more than 24 hours, quarters for them must be provided. Each stateroom for use by them must—

(i) Berth no more than six workers;

(ii) Have clear headroom of at least 1.9 meters (6 feet, 3 inches); and

(iii) Contain at least 1.9 square meters (20 square feet) of deck and at least 4 cubic meters (140 cubic feet) of space for each worker accommodated. The presence in a stateroom of equipment for use by the occupants does not diminish the area or volume of the room.

(3) Toilets and washbasins for use by offshore workers must meet the requirements of paragraph (a)(3) of this section.

(c) Each crew member and offshore worker aboard a vessel of less than 100 gross tons must be provided with accommodations of adequate size and construction, and with equipment for his or her protection and convenience suitable to the size, facilities, and service of the vessel.

(d) For each vessel of 100 or more gross tons, the bulkheads and decks separating accommodations for crew members and offshore workers from machinery spaces must be of "A" Class construction as defined by §92.07-5 of this chapter.

(e) After reviewing the arrangement drawings required by §127.110 of this part, the cognizant OCMI will determine, and record on the vessel's Certificate of Inspection, the number of offshore workers that the vessel may carry.

## Subpart C—Rails and Guards

### § 127.310 Where rails required.

(a) Each vessel must have permanently installed efficient guard rails or bulwarks on decks and bridges. Each rail or bulwark must stand at least 1 meter (39½ inches) from the deck except that, where this height would interfere with the normal operation of the vessel, the cognizant OCMI may approve a lesser height.

(b) At exposed peripheries of the freeboard and superstructure decks, each rail must consist of at least three courses, including the top. The opening below the lowest course must be no more than 230 millimeters (9 inches) with courses no more than 380 millimeters (15 inches) apart. On other decks and bridges each rail must consist of at least two courses, including the top, approximately evenly spaced.

(c) If satisfied that the installation of any rail of the required height would be impracticable, the cognizant OCMI may accept hand grabs or a rail of a lesser height in its place.

### § 127.320 Storm rails.

Suitable storm rails must be installed in each passageway and at the deckhouse sides, including in way of inclined ladders, where persons aboard have normal access. They must be installed on both sides of passageways which are more than 1.8 meters (6 feet) wide.

### § 127.330 Guards in dangerous places.

Suitable hand covers, guards, or rails must be installed on each exposed and dangerous place, such as gears of rotating machinery, and hot surfaces.

## Subpart D—Construction of Windows, Visibility, and Operability of Coverings

### § 127.410 Safety-glazing materials.

Glass and other glazing material used in windows must be material that will not break into dangerous fragments if fractured.

### § 127.420 Strength.

Each window or porthole, and its means of attachment to the hull or the

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deckhouse, must be capable of withstanding the maximum expected load from wind and waves, due to its location on the vessel's and the authorized route of the vessel.

### § 127.430 Visibility from pilothouse.

(a) Windows and other openings at the pilothouse must be of sufficient size and properly located to provide adequate view for safe operation in any condition.

(b) Glass or other glazing material used in windows at the pilothouse must have a light transmission of at least 70 percent according to Test 2 of ANSI Z26.1, "Code for Safety Glazing Materials for Glazing Motor Vehicles Operating on Land Highways," and must comply with Test 15 of ANSI Z26.1 for Class I Optical Deviation.

### § 127.440 Operability of window coverings.

Any covering or protection placed over a window or porthole that could be used as a means of escape must be able to be readily removed or opened. It must be possible to open or remove the covering or protection without anyone's having to go onto a weather deck. It may be necessary to break the glass of a window or porthole before removing or opening the covering or protection.

## PART 128—MARINE ENGINEERING: EQUIPMENT AND SYSTEMS

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### Subpart A—General

#### § 128.110 Equipment and systems.

(a) Except as provided by this part, the design, installation, testing, and inspection of materials, machinery, pressure vessels, and piping must comply with subchapter F of this chapter.

(b) This part contains requirements for equipment and systems commonly found on an OSV. If additional or unique systems, such as for low-temperature cargoes, are to be installed, they too must comply with subchapter F of this chapter.

#### § 128.120 Plan approval.

The plans required by subchapter F of this chapter need not be submitted if the plans required by § 127.110(d) of this subchapter have been.

#### § 128.130 Vital systems.

(a) Vital systems are those systems that are vital to a vessel's survivability and safety. For the purpose of this subchapter, the following are vital systems:

(1) Systems for fill, transfer, and service of fuel oil.

(2) Fire-main systems.

(3) Fixed gaseous fire-extinguishing systems.

(4) Bilge systems.

(5) Ballast systems.

(6) Steering systems and steering-control systems.

(7) Propulsion systems and their necessary auxiliaries and control systems.

(8) Systems for transfer and control of cargo, for integral tanks or fixed independent tanks, in compliance with § 125.110 of this subchapter.

(9) Ship's service and emergency electrical-generation systems and their